



Soapbox Racer Out of Found Material

Written By: Monika



TOOLS:

- [screws, drill, saw \(1\)](#)



PARTS:

- [wheels, base, seat, screws \(1\)](#)

SUMMARY

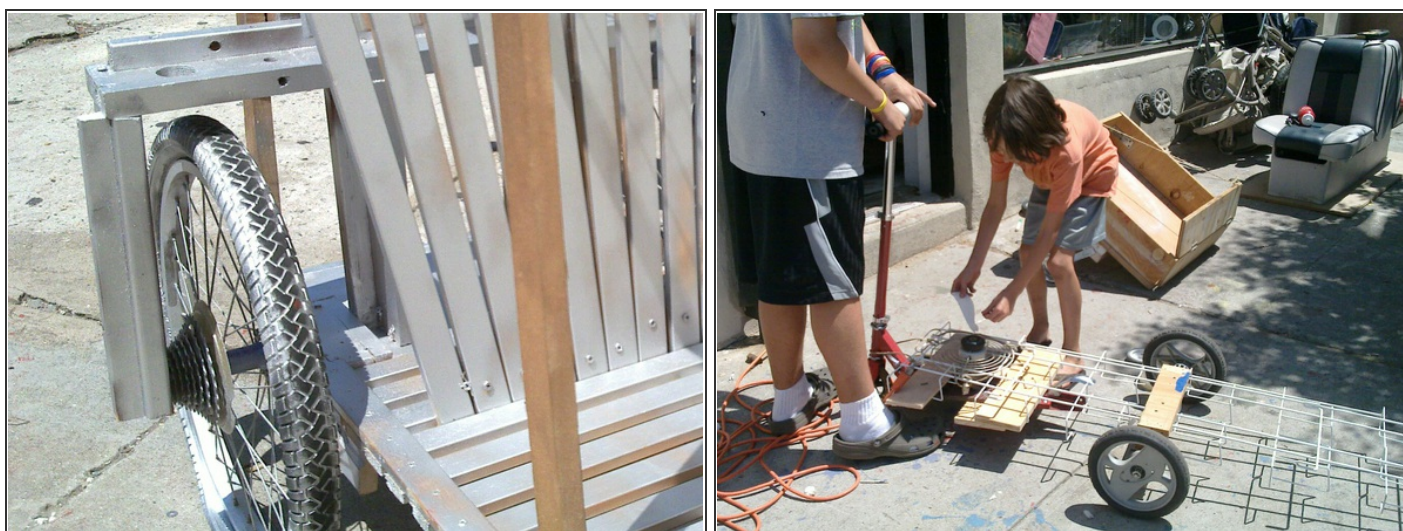
I am the owner of the Open Source Gallery, an alternative art space in the South Slope district of Brooklyn, NY. We host a Soap Box Camp for kids and a Soap Box Derby for kids and adults every August. All cars are built completely out of trash we find in the neighborhood. We organize a block party and, given the fact that our street has a nice incline, we race dozens of vehicles down the street. Judges evaluate the entries on criteria including engineering, design and SPEED! My car made it up to the top 3!

Step 1 — Soapbox Racer Out of Found Material



- Explore the neighborhood for materials that can be recycled as parts for a soapbox car. Specifically, look for a base, wheels and a seat. Old pieces of wood, discarded strollers and cushions are very helpful.

Step 2



- Attach the rear wheels, which should be larger than the front wheels. I had to build a structure around the wheel out of wood. Make sure the wheels spin straight.

Step 3



- Decide on a steering mechanism for the front wheels. This can be accomplished easily by drilling a hole in the middle of a 2-by-4-inch wood block, then connecting the 2-by-4 to the axle and base with a screw. Steer by pushing with your feet on either side of the 2-by-4.
- For my own car I did steer with my feet in some boots I found. The skis were attached with one screw on the front axle, but were not attached in the back. I made some simple tracks with stoppers for stability.

Step 4



- While the point of a soapbox derby is to go fast, it is still important to slow down after the race. A simple piece of wood, screwed to the side of the car, functions as a good hand brake, slowing the car as it drags along the ground.

Step 5



- Construct a seat back by using a flat piece of wood. Foam packing from computer boxes can provide a good cushion.
- I just screwed down a wooden wheel and used that to sit on.
- We had all kinds of funky seating. My son sat on a skateboard, steered with his feet and used the built-in brakes of the back wheels - a set of roller blades.

Step 6



- Finally, accessorize! Get creative. Add a spoiler, license plate, roof, umbrella, sail and headlights. Then paint your soapbox car your favorite color.
- In my design I integrated all the design elements in the engineering.
- My students went crazy!!!!

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